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A SURVEY OF THE SPEECH AND HEARING NEEDS OF RESIDENTS IN FOUR COUNTIES OF AN ECONOMICALLY DEPRESSED AREA. FINAL REPORT.

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THE PURPOSE OF THE SURVEY CONDUCTED BY THE SPEECH AND HEARING CLINIC, NORTHEASTERN STATE COLLEGE, TAHLEQUAH, OKLAHOMA, WAS TO DETERMINE THE NEED FOR SPEECH AND HEARING SERVICES IN FOUR ECONOMICALLY DEPRESSED OKLAHOMA COUNTIES AND TO FIND ECONOMICAL AND EFFECTIVE WAYS OF PROVIDING THE SERVICES. COUNTY SCHOOLS AND DEPARTMENTS OF PUBLIC HEALTH AND WELFARE REFERRED PERSONS WITH SUSPECTED SPEECH OR HEARING HANDICAPS. EACH SUBJECT WAS INTERVIEWED, GIVEN AN AUDIOMETRIC SCREENING TEST, A SIMPLIFIED PHONETIC INVENTORY, A VISUAL EXAMINATION, AND A BRIEF PSYCHOLOGICAL ASSESSMENT. EVALUATION CENTERS WERE ESTABLISHED IN EACH COUNTY. MORE COMPLETE SPEECH AND HEARING EVALUATIONS WERE GIVEN TO THOSE WHO DID NOT PASS THE SCREENING AND WANTED RETESTS. LESS THAN HALF THE PEOPLE REQUESTING APPOINTMENTS FOR EVALUATION APPEARED FOR TESTING BECAUSE OF LACK OF TRANSPORTATION. FOR THE SAME REASON, LESS THAN HALF THE PEOPLE SCHEDULED FOR RETESTING KEPT THEIR APPOINTMENTS. OVER 90 PERCENT OF THE ORIGINAL REFERRALS TESTED HAD AT LEAST ONE MARKED DISORDER, AND MANY SHOWED MULTIPLE DISORDERS. MANY HAD NEVER BEEN PREVIOUSLY EVALUATED AND HAD NOT KNOWN SUCH SERVICES EXISTED. IT WAS RECOMMENDED THAT THE COLLEGE CLINIC SET UP THERAPY TEAMS, THAT A MOBILE UNIT BE ESTABLISHED FOR FIELD USE, AND THAT OTHER AGENCIES ASSIST WITH MEDICAL, DENTAL, AND PSYCHOLOGICAL SERVICES. (HK)

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APR 3 1967

# A SURVEY OF THE SPEECH AND HEARING NEEDS OF RESIDENTS IN FOUR COUNTIES OF AN ECONOMICALLY DEPRESSED AREA

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FINAL REPORT
DECEMBER 1965

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## PREFACE

In discussing with Voyle Scurlock, then Oklahoma State Director of the Vocational Rehabilitation Division, the problems of a depressed area in Northeastern Oklahoma, which is a part of the region which Northeastern State College serves, he felt that the Federal Government would be interested in an exploratory study to find out what primarily were the speech and hearing needs of a sample section. He suggested a conference with Dr. Harold Viaille, Research Specialist. This turned out to be a series of valuable conferences in Oklahoma City and Tahlequah with Dr. Harold Viaille giving generously of his time and valuable advice. He was assisted at times by Mr. James West, Assistant Director for Vocational Rehabilitation, Mr. Edgar Whitehead, Fiscal Officer, and Dr. Donald Keith, Consultant in Rehabilitation Facilities and Workshops. Mr. A. LeRoy Taylor, State Director of Special Education gave valuable help. To all of the above mentioned state men I wish to express my thanks for their generous assistance. I wish to thank Dr. Marjorie E. Moore, Research Program Analyst, Division of Research Grants and Demonstrations, for her excellent advice, Dr. William M. Usdane, Chief, Division of Research Grants and Demonstrations of the Vocational Rehabilitation Administration, Washington, D. C., for very helpful bulletins and advice, and all other government officials who at one time or another sent bulletins or gave advice.

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Mr. Arthur Parrott of the Adair County Welfare Department.

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At Northeastern State College Speech and Hearing Clinic, thanks are due Mrs Doris Woodward, secretary-receptionist, for her most untiring efforts and Miss Charlotte Stephenson, the very capable grant secretary. Thanks, too, are due Mrs. Louise Peake, Supervisor of Clinical Practice.

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I want to express my appreciation to my wife, Mrs. Georgiana Blank, a member of the evaluation team who acted also as driver of the station wagon, helped write the outline for the Grant Report, and helped with the final report by doing most of the writing. I am really her co-author.

Then there were those many others who helped in valuable ways, case workers, teachers, secretaries, custodians, etc., etc. who are thanked for their fine cooperation. Without their help, we could not have functioned efficiently.

One of the valuable assets which accrued from the large number of people who worked together on the project was the growth of the clinic due to the generous sharing demonstrated.

This report was made possible by the Department of Health, Education and Welfare Department, Vocational Rehabilitation Administration, Washington, D. C. Our thanks to the Federal Government for making this project possible.

Earl W. Blank, Ph. D.

Director of Project No. 1706

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# CHAPTER I

# INTRODUCTION

## The Nature of the Problem

A study was originated by the Speech and Hearing Clinic at Northeastern State College in order to assess the speech and hearing needs of residents in a depressed northeastern Oklahoma area where the economic conditions were exceedingly low. The people were naturally of a very retiring nature and progress was not readily accepted. Much exposure was necessary before any change was accepted, however small.

When the college clinic was originally planned it was decided that a survey must be made in the area to determine the need for any clinical services in the speech and hearing field. The college professor who was to be in charge of the proposed clinic and a student interested in therapy training went into the field visiting classrooms in the college service area. Visits were made to one hundred and fifty classrooms. A minimum of 1.9 severe cases of speech or hearing disorders was found in each classroom. With this much definite evidence the clinic was born.

The clinic building was donated and remodelled according to a workable clinic floor plan. Necessary equipment and supplies for operating the facility were made available through the Federal Government and the Oklahoma Vocational Rehabilitation Division.

Soon after the clinic was established people became aware of its presence and began to come in for consultation and treatment. The clinic grew until it became overcrowded and cases were placed

into any space available in other buildings on the campus. However, it was evident that many people who needed speech and hearing services were still not coming to the clinic, in spite of the fact that the fees were minimal. If the individual's economic status was such that he could not pay the minimal fee, fees were waived. Nevertheless, a large percentage of persons referred for services did not come even though there was an intensive follow-up on appointments. Investigation of the problem revealed that lack of transportation was a major difficulty.

After much discussion with school authorities and the offices of special education and vocational rehabilitation it was decided to set up a research study to determine the need and cause of the apparent lack of interest in receiving help for speech and hearing disorders. It was decided to survey a four-county area consisting of Adair, Cherokee, Delaware, and Sequoyah counties, all in the northeastern section of Oklahoma.

Mr. A. LeRoy Taylor, Director of the State Department of Special Education stated, "The area that you serve is especially in need of service. We have a few classes for special programs in the counties you named, however, a great number of the communities have no special services at all."

The Division of Vocational Rehabilitation in Oklahoma City provided another indication of the small percentage of speech and hearing handicapped individuals who were receiving assistance from their available sources. In a report dated June 30, 1963 it showed that only five clients within this four-county area were

receiving rehabilitation services based on a hearing disability. Only two clients were receiving rehabilitation services on the basis of a speech impairment.

The county departments of public health and public welfare reported that there was a large unmet need for both speech and hearing clinical services.

The four-county area selected was chosen because it was near the clinic and was in an economically depressed section of the state. The selected area was insular with few good highways, railroad services were practically non-existent, and bus service was very mediocre. The combination of these circumstances made travel very difficult. Even families with some means of transportation owned cars or trucks of ancient vintage subject to breakdowns or no money was available for gasoline for long distance trips.

It was found that people were living in unsanitary conditions, were poorly dressed, and many were living on welfare. Poor homes, birth conditions, superstitions, lack of understanding of proper diet, defective speech, inadequate hearing, and poor vision were genuine problems.

Not a great deal has been written about northeastern Oklahoma and its problems, so this particular study was new. However, much has been written on the ill effects of life in a poverty stricken area. Harry M. Caudill has written Night Comes to the Cumberland which was published by Little, Brown and Company in 1922. This was perhaps one of the earlier documentations of the factors involved in the study.

Presidents Kennedy and Johnson have expressed concern for the residents of depressed areas in their war on poverty. Magazine and newspaper articles have been devoted to the national concern.

On February 23, 1964 the television program, Depressed Area, U.S.A., presented on a national network illustrated the nationwide interest in the problems of poverty.

"Poverty, U.S.A." was an article in the February 17, 1964, issue of Newsweek which pointed out that the area served by the project was one of the most depressed areas in the United States and it listed one of the counties within the project as the poorest in Oklahoma.

## General Objectives of the Study

The general aim of the study was to determine the needs for speech and hearing clinical services needed in the economically depressed counties of Adair, Cherokee, Delaware, and Sequoyah, in northeastern Oklahoma, and to find the most economical and effective means for providing the needed services.

## Specific Objectives of the Study

To carry out the above general objectives the following specific objectives were sought:

1. Determine the extent and scope of handicapping conditions within the area, and the reasons individuals in need of speech and hearing clinical services had not followed through on the recommendations that such services should be obtained.

2. Discover the characteristics of the handicapped persons within the area.

3. Discover the community resources available in providing needed services for the speech and hearing handicapped.

4. Plan an effective method of providing services for individuals in the four-county area.

## General Statement of Methodology

An evaluation team was sent into the four-county area being sampled to determine the need for speech and hearing services. A station wagon was used for transportation of team members and for carrying equipment to the evaluation centers which were previously set up within each of the counties. The survey on each individual included basic identification data, an audiometric test, a telebinocular test, a phonetic inventory, and a brief psychological assessment. The team operated out of the Speech and Hearing Clinic at Northeastern State College in Tahlequah, Oklahoma.

The testing was conducted one day each week and the time needed was determined by the number of returns to an early questionnaire sent into the four-county area through the public schools, county schools, county public health departments, and county public welfare departments.

## CHAPTER II

## THE PROJECT PROGRAM

### The Operation of the Unit

It was necessary to do much preliminary work before the project could begin. During the months of November and December, 1964, the project director visited appropriate personnel within each county in the survey area to make arrangements for the establishment of the test centers. The personnel visited included the departments of public welfare, the health departments, county medical associations, public school superintendents and principals, city and county officials, and other individuals and agencies which seemed appropriate. The Division of Vocational Rehabilitation was consulted for suggestions and recommendations.

Arrangements were made for space to set up testing equipment for an evaluation center in each area. Evaluation centers were established at Stilwell and Westville in Adair County, at Tahlequah in Cherokee County, at Jay in Delaware County and at Muldrow, Sallisaw, and Roland in Sequoyah County. The process for referral to the evaluation team was explained to each agency representative, and their cooperation was enlisted. Particular attention was given to the county medical associations and the departments of public health to obtain any quick medical check on the individuals referred to the evaluation centers.

Actual evaluations began during the month of January, 1965 and continued through May, 1965. Since this was the actual length

of the second semester and the workable referrals were obtained through the high school students and public health nurses, it seemed the best way direct access to these referrals could be obtained.

The city and county schools, the public health nurses, and departments of public welfare distributed a questionnaire and referred persons with suspected handicaps in speech or hearing. When the questionnaires were filled out and returned to the project director at the Speech and Hearing Clinic appointments were scheduled. The hours and dates for the appointments were sent to the individuals for whom testing was requested and carbon copies of the lists of these individuals were sent to the referring agencies. On a specified date the evaluation team arrived at the evaluation center and set up the testing equipment. Each individual progressed through the battery of four tests until his evaluation was complete.

The data for each individual tested were collected on five forms:

Registration Form

A registration form was constructed by members of the project team to supply basic identification data such as age, address, amount of education, social and family information, etc., to be used in the determination of the characteristics of this disabled group. This information was also needed in determining the referrals to the various community agencies. See Appendix H.

Phonetic Inventory

The phonetic inventory was a screening articulation test composed of a simple counting test and a color test which involved most of the speech sounds. The test administrator listened for omissions, distortions, and specific speech disorders. See Appendix J.

Auditory Screening

The auditory examination results were recorded on a standard audiometric screening form. See Appendix K.

Vision Screening

The results of the vision tests were recorded on Record Form Number 5A, Keystone Visual Survey Tests for use with No. 46 Visual Survey Telebinocular, as described in Appendix L.

Psychological Assessment

The psychological assessment was the Culture Fair Intelligence Test, Scales 1, 2, and 3, Form A. It was a relatively short test and was administered in specified age groups. It had a low loading on verbal factors. Due to copyright laws a sample could not be included in the report but a brief description and the publication information are described in Appendix L.

Each testing day the team returned to the clinic where the tests were scored and evaluated to determine the need of each individual tested. As this was done, each individual was screened for further referral to the Speech and Hearing Clinic or other agencies.

## The Staff

The staff for the project was composed of a project director who devoted one-fifth of his time to the study. He had the overall responsibility for the administration of the survey and functioned in whatever capacities were required of him during the project.

Three student clinicians and the wife of the project director functioned as team members--thus providing one individual for administering each of the individual tests. The psychological test groups were set up in specific age groups and one group given to each team member. As a team, each of these individuals devoted one day each week to the testing program and whatever extra time was necessary to compile data, etc., as designated by the project director.

County medical agencies were helpful in making voluntary medical assessments where their assistance was needed for physical screening.

## Referrals

Project referrals were obtained through the agencies discussed earlier in this chapter. This was a survey project and it was anticipated that many of the referrals to the centers would need to be referred to other agencies for further services or further evaluation. The Northeastern State College Speech and Hearing Clinic was made available for more complete speech and hearing evaluations and treatment for those referrals who could obtain transportation to and from the clinic. Other arrangements had to be made to provide services and evaluations for those referrals who could not attend the college clinic.

In addition to obtaining referrals from the questionnaires, it

was possible to obtain self-referrals due to information received by these individuals through newspaper publicity or radio broadcasts.

## Data Selection and Analysis

The official census of the four county area was listed at 65,569 people. It was made up of White, Indian, and Negro families, most of them very large, and unable to provide even meagerly for their families. Many of these families were being entirely provided for by the departments of public welfare and public health which receive some assistance locally through civic and church organizations in providing food, clothing, and medical services. A characteristic of the people, generally resulting from these poor conditions, was that they were generally shy and retiring. They were prone to be somewhat skeptical due perhaps to earlier broken promises of real assistance. They were also prone to ignore their handicaps and accept them as a matter of fact.

## Data Selection Methods

In the pre-survey it was determined that in the 65,569 count area questionnaires would be distributed to find out whether or not there was a serious need for testing speech and hearing handicaps. A total of 5,394 questionnaires were distributed in cooperation with the departments of public welfare, the public health departments, and school administrators of both city and county schools. Each form was designed to include the entire family, and it was to indicate for each person whether or not there was a definite speech or hearing problem, and also if any were not sure whether there was a speech or hearing

problem. Information from this questionnaire made it possible for the evaluation team to estimate the number of tests to be scheduled. See Appendix A.

The population of each county determined the number of questionnaires sent to each county.

TABLE 1

AREA POPULATION BY COUNTIES

| County | Population | Questionnaires Sent Out | Questionnaires Returned |
|---|---|---|---|
| Adair | 16,608 | 1,000 | 160 |
| Cherokee | 17,762 | 1,480 | 204 |
| Delaware | 13,198 | 1,305 | 163 |
| Sequoyah | 18,001 | 1,609 | 249 |
| TOTAL | 65,569 | 5,394 | 776 |

The above survey was made to determine the need and interest in the four-county area.

So that the testing team would be able to set up an effective working time schedule to determine how many individuals could be tested in each half day session, students from the Sequoyah Indian High School were brought to the clinic where a trial testing session was conducted.

The testing team estimated on the basis of this trial that fifty-three people would be the maximum number who could be tested in

a single day, working from 8:15 in the morning to 4:30 in the afternoon. Generally less than an hour was allowed for a noon break for lunch.

## Data Collection

When the questionnaires were returned, appointment schedules were set up in the clinic office. Originally it was thought that all replies to the "Yes" and "Not Sure" items could be scheduled. However, since 776 persons indicated there was a real speech or hearing difficulty, time permitted only the testing of those who gave a response of "Yes" to the items "Has Trouble Hearing" or "Has Trouble Talking Plainly". There were 402 who checked the "Not Sure" column. A week previous to the appointment, dates and personnel lists were sent to each of the cooperating agencies. Appointment cards were sent to each individual scheduled, telling them when to appear and giving the exact location of the testing center. Each testing day the team went to the center and set up the testing equipment.

Each person was checked at the registration desk and the registration form was completed. Following the registration each person was given a simple articulation test. It proved to be a good icebreaker because of its simplicity. The audiological and telebinocular tests were given next. The psychological tests were given in age groups after the first three tests were completed.

It was necessary to divide the persons into four age groups

for psychological testing. A team member was in charge of each group. The groups were as follows: Group 1, ages 4 to 7; Group 2, ages 8 to 13; Group 3, ages 14 to 28; and Group 4, age 30 and up.

## The Instruments

The articulation test was a very simple, short, screening test which had been used very successfully for a long time at the Northeastern State College Speech and Hearing Clinic. It asked each individual to give the numbers from one to ten and then name eight colors: red, blue, yellow, purple, orange, green, white, and black.

The telebinocular test used was the Keystone Visual Survey Test, Form 5A, and the machine was the Keystone No. 46 Visual Survey Telebinocular.

The audiometric test was given on the Beltone Portable Audiometer, Model 10C with Otocups; set at a 20 decibel sensation level re: 1964 ISO reference threshold.

The psychological tests and the age levels in which they were used were:

Culture Fair - Scale 1 - Ages 4--7.

Culture Fair - Scale 2 - Ages 8--13.

Culture Fair - Scale 3 - Form A - Ages 14--29.

Culture Fair - Scale 3 - Form A - Ages 30 and up.

## Project Evaluation

The evaluation of a survey project is usually based upon the number of individuals who fall within the defined scope of the project. The base line for an evaluation of the project lay in an estimated percentage of the population handicapped by speech and hearing disorders as established by the U. S. Office of Education. It was not anticipated that the project would survey as many people as these estimates indicated. The characteristics of the people living within the area studied prevented the survey team from contacting all of the population. The time element also limited the number of individuals who could be contacted. Accordingly, the evaluation of the project was based on the following two factors:

1. Did the results in the communities reveal a need for an action program for people with speech and hearing disabilities?

2. To what extent did the survey result in improved services to the people surveyed? As an example, the Division of Vocational Rehabilitation reported only seven individuals from the area suffering from speech and hearing disabilities on the case load. At the close of the project and evaluation of the results it would be expected that a larger number would be needing clinical services. The methodology provided for the maintenance of statistics of this type.

## Available Resources

Northeastern State College at Tahlequah, Oklahoma is really the most important resource which was available in carrying out this project. The college Speech and Hearing Clinic had a long history of public service and cooperation with state and local organizations in provision of evaluations and services to individuals needing speech and hearing therapy. Cooperative agreements were in force between the Speech and Hearing Clinic, the Department of Public Welfare, and the Division of Vocational Rehabilitation. The clinic had been involved with many of the public schools in the area including the Sequoyah Indian High School, the Oklahoma School for the Blind, the Oklahoma School for the Deaf, and two state schools for the mentally retarded. The clinic has served as a consultant to speech and hearing specialists in Muskogee, Tahlequah, Tulsa, and McAlester, Oklahoma. The clinic is under the direction of Earl W. Blank, who holds a Ph. D. degeee in speech pathology from the University of Denver, and who also holds the Advanced Clinical Certificate in Speech and the Certificate of Clinical Competence in Speech Pathology from the American Speech and Hearing Association.

The psychology department at Northeastern State College was another major resource available for the project. Faculty members from the psychology department agreed to serve as consultants to the project in terms of the testing procedures utilized.

Northeastern State College furnished the station wagon to

transport team members and equipment to the evaluation centers, and the project director's services was used as a matching fund.

The public service functions which the clinic had provided the various communities within the survey area have cultivated a very close cooperative relationship which has contributed a great deal to the success of the project.

# CHAPTER III

# RESULTS

## General Overview

A majority of the referrals from the 5,394 questionnaires distributed by the cooperating agencies were returned from the public school systems. The probable reason for the schools returning a good percentage is that they were distributed while school was in session and were filled out during the class period. Other agencies distributed the questionnaires on an individual basis or in small groups. The public health departments provided the most assistance in the actual testing program.

In three of the four counties the health department personnel provided the testing centers, assisted with the registration, and gave the testing team necessary information concerning the personal and physical status of the individuals who came to be tested.

In the fourth county the testing center was set up in two public school centers but the public health department took charge of all the arrangements. Of the 322 actually registered for testing, 51 were referred by the departments of public welfare, 15 were referred by the public health departments and 256 were referred from the city and rural school systems.

In each of the counties the school personnel, superintendents, principals, and some teachers were extremely interested in the testing procedures and the results of the testing. In some cases

the departments of public welfare asked the director of the project to explain the testing procedure to the case workers.

Many individuals who accompanied the people to be tested showed much interest and concern that something could be done in the immediate communities to be of permanent assistance to the people. This would, they were sure, make people aware of their problems and handicaps. It would also develop a desire for assistance.

## Survey Facts

From the 5,394 questionnaires distributed, 776 definite requests for appointments were received. The evaluation team actually tested 322 of the people of the 776 appointments that were scheduled for the four testing centers.

Tests were actually given to a minimum of three people in a session and to a maximum group of 53 in two full daily sessions.

Anyone who answered a referral and came to the testing center was admitted for testing. Actual ages in the testing sessions ranged from ages 3 to 85.

In one center one 100 year old person requested testing, along with another of 95, one of 94, two of 93, and one of 90. These were unable to appear for testing because of transportation although these people lived a short distance away. They were residents of a rest home but were quoted as being "mentally alert and wanting help". It was impossible to take the testing equipment to the rest home because of the time element. At

another center two men, 85 and 77 walked from a rest home across town to take the tests and were vitally interested in the project.

Some interesting and informative data were compiled on age levels in the four-county area.

TABLE 2

DISTRIBUTION IN AGE LEVELS 4--7

| | COUNTY | | | | |
|---|---|---|---|---|---|
| Age | Adair | Cherokee | Delaware | Sequoyah | Total |
| 3* | 0 | 0 | 1 | 0 | 1 |
| 4 | 1 | 0 | 2 | 1 | 4 |
| 5 | 3 | 0 | 1 | 2 | 6 |
| 6 | 2 | 1 | 3 | 8 | 14 |
| 7 | 8 | 3 | 4 | 11 | 26 |
| TOTAL | 14 | 4 | 11 | 22 | 51 |

* Tested at the request of the Delaware County Health Department.

TABLE 3

DISTRIBUTION IN AGE LEVELS 8--13

| | COUNTY | | | | |
|---|---|---|---|---|---|
| Age | Adair | Cherokee | Delaware | Sequoyah | Total |
| 8 | 2 | 4 | 1 | 14 | 21 |
| 9 | 4 | 2 | 5 | 16 | 27 |
| 10 | 3 | 1 | 5 | 12 | 21 |
| 11 | 5 | 3 | 7 | 10 | 25 |
| 12 | 1 | 4 | 2 | 10 | 17 |
| 13 | 1 | 4 | 4 | 5 | 14 |
| TOTAL | 16 | 18 | 24 | 67 | 125 |

TABLE 4

DISTRIBUTION IN AGE LEVELS 14--29

| | COUNTY | | | | |
|---|---|---|---|---|---|
| Age | Adair | Cherokee | Delaware | Sequoyah | Total |
| 14 | 2 | 1 | 2 | 6 | 11 |
| 15 | 9 | 0 | 2 | 7 | 18 |
| 16 | 2 | 5 | 3 | 8 | 18 |
| 17 | 3 | 5 | 1 | 5 | 14 |
| 18 | 0 | 3 | 1 | 1 | 5 |
| 19 | 0 | 1 | 2 | 0 | 3 |
| 21 | 0 | 2 | 1 | 0 | 3 |
| 23 | 0 | 1 | 0 | 0 | 1 |
| 28 | 0 | 1 | 0 | 0 | 1 |
| TOTAL | 16 | 19 | 12 | 27 | 74 |

TABLE 5

DISTRIBUTION IN AGE LEVELS 30 UP

| | COUNTY | | | | |
|---|---|---|---|---|---|
| Age | Adair | Cherokee | Delaware | Sequoyah | Total |
| 30's | 3 | 2 | 4 | 4 | 13 |
| 40's | 0 | 4 | 2 | 6 | 12 |
| 50's | 1 | 9 | 5 | 7 | 22 |
| 60's | 3 | 3 | 0 | 4 | 10 |
| 70's | 0 | 4 | 2 | 4 | 10 |
| 80's | 0 | 3 | 0 | 2 | 5 |
| TOTAL | 7 | 25 | 13 | 27 | 72 |

TABLE 6

DISTRIBUTION IN AGE LEVEL IN ALL FOUR COUNTIES

| County | 4 - 7 | 8 - 13 | 14 - 29 | 30 up | Total |
|---|---|---|---|---|---|
| Adair | 14 | 16 | 16 | 7 | 53 |
| Cherokee | 4 | 18 | 19 | 25 | 66 |
| Delaware | 11 | 24 | 12 | 13 | 60 |
| Sequoyah | 22 | 67 | 27 | 27 | 143 |
| TOTAL | 51 | 125 | 74 | 72 | 322 |

Totaling the figures for the four counties it was discovered that of the 322 actually tested, 249 were in the age group of 4 to 29 and 72 were in the age group of 30 through 80 and 1 three year old was tested at the special request of the Delaware County Health Department.

The four counties surveyed were in the heart of the Indian population of the state. In fact, Adair County claims to be the heart of the national Indian population. This probably accounts for the fact that so many of the people live far out of the range of city habitation, deep in the woods. It also indicates why, with this Indian population, so few came to be tested even though they signed cards requesting appointments. The general area is not predominately negro so very few negroes requested appointments.

TABLE 7

DISTRIBUTION BY RACE

| | RACE | | | |
|---|---|---|---|---|
| County | White | Indian | Negro | Total |
| Adair | 43 | 10 | 0 | 53 |
| Cherokee | 52 | 14 | 0 | 66 |
| Delaware | 44 | 16 | 0 | 60 |
| Sequoyah | 116 | 14 | 13 | 143 |
| TOTAL | 255 | 54 | 13 | 322 |

TABLE 8

DISTRIBUTION BY SEX

| | SEX | | |
|---|---|---|---|
| County | Male | Female | Total |
| Adair | 32 | 21 | 53 |
| Cherokee | 42 | 24 | 66 |
| Delaware | 34 | 26 | 60 |
| Sequoyah | 90 | 53 | 143 |
| TOTAL | 198 | 124 | 322 |

At the close of the testing periods the test results were evaluated and the results showed that there was almost an even balance between the psychological and audiometric referrals. Apparently the individuals could not hear the directions clearly enough to understand them and therefore did not know how to proceed with the tests.

The following charts for each county will show this ratio a scale of 10 to set up the actual psychological scores ranging from 0 to 126 made on the test. There was a total of 116 persons with hearing disabilities who scored below the 75 I.Q. set up for mental retardation. Only 51 persons with hearing disorders scored above a 75 I.Q.

TABLE 9

DISTRIBUTION OF HEARING DISCRDERS AND THE RELATION TO MENTAL RETARDATION

| ADAIR COUNTY | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | I | Total |
| 3 | 12x | 31 | 40x | 56 | 61 | 70 | 82 | 93x | 101 | 5 | |
| 3 | 12x | 33x | 40x | | 61 | 72 | 88x | 93 | 103 | | |
| 4x | 13x | | 40 | | 62 | 74 | | 94x | | | |
| 4 | | | 42x | | 60x | 76 | | 94 | | | |
| 6 | | | 42 | | 62x | 76 | | | | | |
| 7 | | | | | 64x | 78x | | | | | |
| 8 | | | | | 64x | 78x | | | | | |
| | | | | | 64 | | | | | | |
| | | | | | 66x | | | | | | |
| | | | | | 65x | | | | | | |
| | | | | | 68x | | | | | | |
| | | | | | 68x | | | | | | |
| | | | | | 68 | | | | | | |
| | | | | | 68 | | | | | | |
| | | | | | 67 | | | | | | |
| 7 | 3 | 2 | 5 | 1 | 15 | 7 | 2 | 4 | 2 | +5 = | 53 |
| MENTAL RETARDATION | | | | | | | | | | | |
| TOTAL | | 36 | | | <----- 75 -----> | | | 12 | | +5 = | 53 |
| Number of Hearing Discrders = 16 | | | | | | Number of Hearing Discrders = 5 | | | | | |

I = Invalidated Test.

x = Hearing Loss Discovered.

TABLE 10

DISTRIBUTION OF HEARING DISORDERS AND THE RELATION TO MENTAL RETARDATION

| CHEROKEE COUNTY | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | I | Total |
| 2<br>2 | 29 | | 40x<br>40x<br>40x<br>40x<br>40<br>40<br>43x | 50<br>57x<br>58 | 62x<br>62<br>65 | 74x<br>74<br>76<br>76<br>77<br>77<br>77<br>77<br>78<br>79x<br>79<br>79x<br>79 | 82x<br>82x<br>87<br>87x<br>88x<br>88<br>89 | 92<br>99 | 100x<br>101<br>101<br>104x<br>104x | 111x<br>116x<br>119<br>125 | 21 | |
| 2 | 1 | 0 | 7 | 3 | 3 | 11 | 7 | 2 | 5 | 4 | +21= | 66 |
| MENTAL RETARDATION<br>TOTAL 18 <---- 75 ----> 27 + 21 = 66 | | | | | | | | | | | | |
| Number of Hearing Disorders = 8 | | | | | | | | | Number of Hearing Disorders = 10 | | | |

I = Invalidated Test.

x = Hearing Loss Discovered.

TABLE 11

DISTRIBUTION OF HEARING DISORDERS AND THE RELATION TO MENTAL RETARDATION

| DELAWARE COUNTY | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | I | Total |
| 4x | 0 | 36x | 40x | 50x | 60x | 70x | 81x | 93 | 100x | 111x | 0 | 130 | 13 | |
| 4x | | | 40x | 57x | 61x | 70x | 84 | 94x | 100x | 113x | | 131x | | |
| 4 | | | 42x | 58x | 63 | 76 | 86x | 95x | 109x | 114 | | | | |
| 6x | | | | | 65x | 77x | 89x | 98x | | 116x | | | | |
| 6x | | | | | 65x | 77 | | | | | | | | |
| 6 | | | | | 65 | | | | | | | | | |
| 7x | | | | | 68 | | | | | | | | | |
| 7x | | | | | | | | | | | | | | |
| 7x | | | | | | | | | | | | | | |
| 8x | | | | | | | | | | | | | | |
| 9x | | | | | | | | | | | | | | |
| 11 | 0 | 1 | 3 | 3 | 7 | 5 | 4 | 4 | 3 | 4 | 0 | 2 | +13 = 60 | |
| Total | | 27 | | | Mental Retardation ←---- 75 ----→ | | | | | | 20 | | +13 = 60 | |
| Number of Hearing Disorders = 22 | | | | | | | | | | | Number of Hearing Disorders = 14 | | | |

I = Invalidated Test.
x = Hearing Loss Discovered.

TABLE 12

DISTRIBUTION OF HEARING DISORDERS AND THE RELATION TO MENTAL RETARDATION

| SEQUOYAH COUNTY | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | I | Total |
| 0x | 10x | 20x | 31 | 40x | 50x | 61x | 70x | 80x | 92x | 100 | 118 | 121x | 7 | |
| 0x | 11x | 22x | 31 | 40x | 50x | 61x | 72x | 81x | 92 | 102 | | 127x | | |
| 0x | 14x | 23 | 31 | 40x | 50x | 60x | 72x | 82 | 92x | 104 | | 126x | | |
| 0x | 14 | 25x | 37 | 40x | 50 | 62x | 73x | 84x | 94x | 105 | | | | |
| 0x | 19 | 26 | 37 | 40x | 51x | 65x | 75x | 85 | 94x | | | | | |
| 0x | | 28 | 38x | 40x | 51 | 65 | 75 | 85x | 95x | | | | | |
| 0x | | | 38 | 40x | 54 | 65x | 75x | 87x | 95x | | | | | |
| 0x | | | 39 | 40x | 55x | 65x | 75x | 87x | 96 | | | | | |
| 0x | | | | 40x | 55 | 67x | 75x | 87x | | | | | | |
| 0x | | | | 40x | 56x | 67x | 75 | 88 | | | | | | |
| 0x | | | | 42x | 57x | 67 | 78x | 88 | | | | | | |
| 0x | | | | 43x | 59x | 69x | 78x | 89 | | | | | | |
| 0x | | | | | 59x | 65 | 78x | 89 | | | | | | |
| 0x | | | | | | | 78x | 89 | | | | | | |
| 0x | | | | | 52x | | 79x | 89 | | | | | | |
| 0x | | | | | | | 79x | 89 | | | | | | |
| 0x | | | | | | | | 89 | | | | | | |
| 0x | | | | | | | | 85 | | | | | | |
| 0x | | | | | | | | | | | | | | |
| 0x | | | | | | | | | | | | | | |
| 1x | | | | | | | | | | | | | | |
| 1x | | | | | | | | | | | | | | |
| 4x | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | |
| 7x | | | | | | | | | | | | | | |
| 28 | 5 | 6 | 8 | 12 | 14 | 13 | 16 | 18 | 8 | 4 | 1 | 3 | +7 | 143 |

TABLE 12 (Continued)

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | I | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mental Retardation | | | | | | | | | | | | | | |
| TOTAL | | | | 90 | | | <---- 75 ----> | | | | 46 | | + 7 | = 143 |
| Number of Hearing Disorders = 71 | | | | | | | | | | Number of Hearing Disorders = 22 | | | | |

I = Invalidated Tests.
x = Hearing Loss Discovered

Vision disorders fell into third place and articulatory disorders were the least evident, although the number was still alarming.

Only 13 of the 322 persons tested in the four-county area had none of the four disorders tested.

It was necessary to establish standards for determining a marked disorder. Referrals were made on the basis of the following standards:

1. The testee was considered to be defective and in need of speech services if he omitted, substituted, or distorted one or more speech sounds in the initial, medial, or final positions in words on the articulation test.

2. The testee was screened in the speech frequencies of 500, 1000, and 2000 cycles. A loss greater than 30 dB in any of these frequencies in either or both ears was considered to be a hearing deficiency and was referred for complete audiometric testing.

3. The vision test was scored according to regulations for the Keystone Telebinocular, and testees were referred to an opthalmologist when their score was unsatisfactory.

TABLE 13

DISTRIBUTION OF MARKED DISORDERS FOUND

| County | Total Tested | Articulation | Audiometric | Telebinocular | Psychological | Total Disorders |
|---|---|---|---|---|---|---|
| Adair | 53 | 23 | 27 | 27 | 41 | 118 |
| Cherokee | 66 | 22 | 44 | 48 | 39 | 153 |
| Delaware | 60 | 24 | 48 | 42 | 40 | 154 |
| Sequoyah | 143 | 60 | 99 | 78 | 97 | 334 |
| TOTAL | 322 | 129 | 218 | 195 | 217 | 759 |

TABLE 14

NUMBER OF MARKED DISORDERS PER INDIVIDUAL *

| County | One Marked Disorder | Two Marked Disorders | Three Marked Disorders | Four Marked Disorders | No Marked Disorders | Total |
|---|---|---|---|---|---|---|
| Adair | 13 | 19 | 17 | 4 | 0 | 53 |
| Cherokee | 10 | 19 | 27 | 6 | 4 | 66 |
| Delaware | 7 | 17 | 22 | 12 | 2 | 60 |
| Sequoyah | 23 | 44 | 48 | 21 | 7 | 143 |
| TOTAL | 53 | 99 | 114 | 43 | 13 | 322 |

* Some of the individuals tested had only one marked disorder, some had two marked disorders, some had three and some had four.

During the testing programs it was necessary to invalidate some of the tests. This was done when old age prevented the actual testing, on several occasions when the people could speak only Cherokee, when the individuals who had to wear reading glasses had left them at home, and on two or three occasions when illness developed during the testing period.

Each of the 310 persons in the four counties who were tested were notified that appointments would be given if further testing was recommended and desired. In reply to these letters 75 people sent back the return cards and requested testing appointments. Testing appointment sessions were set up at the clinic and letters of notification were sent to each of the 75 persons.

Appointments for retesting were set up for the 75 people on seven days at the beginning of the fall term and the individuals were notified.

Clinical testing teams were then set up at the Northeastern Speech and Hearing Clinic to administer complete speech and hearing evaluations. Upon completion of these tests, the tabulation showed that 33 of the 75 who requested further testing actually met their appointments. This leads one to the conclusion that, in spite of the fact that the people want to come for help, the factor of transportation is a major problem. Indifference stems from an inability to travel and from the lack of knowledge of the seriousness of the problem.

In the retesting process 7 recommendations were made for articulation therapy at the clinic--14 recommendations were made for

hearing services--1 was referred to an otologist--22 were found to have below 75 I.Q.--3 recommendations were made for neurological examinations--and 8 had invalidated I.Q. tests.

The age range was as follows:

| Age | No. | Age | No. | Age | No. | Age | No. |
|---|---|---|---|---|---|---|---|
| 4 | 3 | 11 | 2 | 16 | 1 | 48 | 1 |
| 6 | 4 | 12 | 2 | 17 | 3 | 61 | 1 |
| 7 | 1 | 13 | 1 | 18 | 2 | 65 | 1 |
| 8 | 1 | 14 | 1 | 27 | 1 | 67 | 1 |
| 10 | 3 | 15 | 1 | 30 | 2 | 75 | 1 |

There were 20 males and 13 females who came in for retesting. No available transportation was the reason given for not coming. Although many indicated a desire for testing, they could not make it.

The Oklahoma City Vocational Rehabilitation office requested that all persons between the ages of 17 and 65 whose testing indicated that further assistance was needed be referred to the Vocational Rehabilitation office in Muskogee, Oklahoma. Nine persons were referred for services.

The referral letter and list may be seen in Appendixes R and S.

All of the statistics given in this report refer to the group of positive disorders. There were enough who indicated on the questionnaire that they were "not sure" of a speech or hearing difficulty to make some observations on them.

Based on information gained from the original questionnaire sent out the "not sure" statistics are as follow. See Appendix B.

TABLE 15

"NOT SURE" STATISTICS--SPEECH AND HEARING

| County | Speech | Hearing | Both | Total |
|---|---|---|---|---|
| Adair | 9 | 11 | 7 | 27 |
| Cherokee | 68 | 83 | 27 | 178 |
| Delaware | 47 | 54 | 23 | 124 |
| Sequoyah | 35 | 14 | 24 | 73 |
| TOTAL | 159 | 162 | 81 | 402 |

TABLE 16

"NOT SURE" STATISTICS--AGE LEVELS

| County | 4-7 | 8-13 | 14-29 | 30 up | No Age Given | Total |
|---|---|---|---|---|---|---|
| Adair | 9 | 7 | 5 | 6 | 0 | 27 |
| Cherokee | 16 | 29 | 66 | 64 | 3 | 178 |
| Delaware | 14 | 31 | 32 | 30 | 17 | 124 |
| Sequoyah | 12 | 19 | 15 | 25 | 2 | 73 |
| TOTAL | 51 | 86 | 118 | 125 | 22 | 402 |

TABLE 17

"NOT SURE" STATISTICS--SEX DISTRIBUTION

| County | Male | Female | Total |
|---|---|---|---|
| Adair | 11 | 16 | 27 |
| Cherokee | 98 | 80 | 178 |
| Delaware | 50 | 74 | 124 |
| Sequoyah | 39 | 34 | 73 |
| TOTAL | 198 | 204 | 402 |

TABLE 18

"NOT SURE" STATISTICS--RACE DISTRIBUTION

| County | White | Indian | Negro | No Race Given | Total |
|---|---|---|---|---|---|
| Adair | 22 | 5 | 0 | 0 | 27 |
| Cherokee | 143 | 32 | 3 | 0 | 178 |
| Delaware | 85 | 37 | 0 | 2 | 124 |
| Sequoyah | 39 | 13 | 12 | 9 | 73 |
| TOTAL | 289 | 87 | 15 | 11 | 402 |

These "Not Sure" statistics further confirm the fact of the great need presented,

# CHAPTER IV

## IMPLICATIONS

The survey revealed a definite need for developing a coordinated effort among all agencies to reach the people definitely in need of speech and hearing services. A coordinated effort would eliminate duplication of services and would distribute assistance so that all individuals needing speech and hearing services would be reached. The study, which was set up as a survey and planning project, revealed that these services were vital to a wider area than the population sampled.

The project showed that there was a real need because from the total of the original referrals tested, 94.50 per cent had at least one marked disorder and many showed the need for training and assistance in all four areas tested: articulation, hearing, vision, amd as a result of the combinatinn of the first three, psychological services and training.

The project revealed that 23.35 per cent of the persons scheduled for testing did not appear for their appointments. This was probably the result of inadequate or no transportation. In some instances children in the school age levels were brought in by school busses but those below and above had no direct access to transportation so they did not make the effort to come.

Many of these people that were tested were in good enough condition so that rehabilitation to work, to succeed in school, and to develop the art of homecraftmanship for small market, would not be an impossibility. By doing this, the social and economic development of

the entire area could be benefited. A more evident result would be the establishment of the dignity and confidence of these people.

An educational program directed at parents, teachers, and administrators would be helpful.

When a person listed himself as "not sure" there was likely to be some evidence of actual disorder. If it were possible to go to the people directly more help could be given.

# CHAPTER V

# SUMMARY AND CONCLUSIONS

## Summary

From November 5, 1964 through December 17, 1964 the project director and one member of the evaluation team made 19 visitations travelling 635.3 miles. They visited the offices of the departments of public health, departments of public welfare, and superintendents of county and city schools and presented the proposed study of the speech and hearing disorders in the four-county area. It was explained that the area was chosen because of its proximity to the use of clinical services available at the Northeastern State College Speech and Hearing Clinic.

The agencies contacted were very pleased with the possibilities of the survey and its ultimate aim to bring services directly to the people. There was no way of bringing people even into their own test centers except by the use of school busses.

The agencies agreed to assist the project by supplying rooms for the test centers and by helping with the registration and testing program. They also agreed to be the coordinators for the distribution and return of the original questionnaires.

Questionnaires were distributed by the departments of public welfare, the departments of public health, and the superintendents of high schools. When the questionnaires were returned appointments were scheduled and notices were sent to each individual and to the referring agencies. A list of the appointments scheduled was also

sent to the person in charge of each test center. The appointment letters gave the time and date of the testing and the finding address of the test center.

In order to determine the number of persons who could be tested in one day, a practice test session was set up with a group of 15 students from the Sequoyah Indian High School at Tahlequah for the purpose of timing the testing procedure. On the basis of the practice session it was decided that 25 persons could be tested each half day. This made a testing load of approximately 50 people who could be scheduled each test day.

Appointments were sent to all individuals listed on the questionnaires who were reported to have a hearing or speech problem.

The evaluation team started early in February, 1965 and continued through May, 1965. The team travelled 1,093.7 miles, making a total of 1,729.0 including the original visitations of the director of the project.

## Conclusions

The response to the testing program was encouraging and the people coming in to the centers were most cooperative and interested, as were the agencies. Some of the people had never had tests for speech, hearing, vision, and mental ability and they said they had not known such services were available. The small children who came were generally fascinated with the testing machines and methods of operation. Many of the older people who came did not speak English well and had to have an interpreter relay their questions and answers

in the Cherokee language. Many of the people explained that it was very difficult for them to get to the centers as their means of transportation were poor and they were thus limited in the distances they could drive. Many people expressed that it was an impossibility for them to come to the Speech and Hearing Clinic for services because their cars would not travel that far.

There seemed to be much interest on the part of both people and agencies in providing transportation, but the lack of money for transportation proved to be a major problem.

## Recommendations

As a result of the study the need for a mobile unit especially designed to carry the necessary equipment and personnel seemed to be the only solution. The unit could be similar to that of bookmobiles or x-ray units which are common today.

It is recommended that the college clinic be allowed to set up therapy teams to go into the field to serve the speech and hearing needs. It is also recommended that the mobile unit go into the field four days each week--one day in each of the counties surveyed. On the fifth day the mobile unit would be on the college campus for use as a clinical facility.

It is recommended that the cooperating test centers assist with medical, dental, and if possible, psychological services by cooperating with the available agencies in the area such as guidance centers and clinics. Centers could be set up in rural schools, churches, and/or small community buildings.

APPENDIX A

QUESTIONNAIRE

Dear Parent:

We are attempting to locate all those people in your area (no matter what the age) who may need help because of a speech and/or hearing problem. Will you please fill out all the blanks, circle the answers that you feel best tells about yourself and your family. Please return this form to school TOMORROW. All of the below information will be regarded by us as confidential.

1. Date _____ 2. Issuing Agency _____

| 3. List All Members of Family | 4. Age | 5. Sex | 6. Has Trouble Hearing | 7. Has Trouble Talking Plainly |
|---|---|---|---|---|
| | | | (Circle One) | (Circle One) |
| 1) | | | yes no not sure | yes no not sure |
| 2) | | | yes no not sure | yes no not sure |
| 3) | | | yes no not sure | yes no not sure |
| 4) | | | yes no not sure | yes no not sure |
| 5) | | | yes no not sure | yes no not sure |
| 6) | | | yes no not sure | yes no not sure |
| 7) | | | yes no not sure | yes no not sure |
| 8) | | | yes no not sure | yes no not sure |
| 9) | | | yes no not sure | yes no not sure |
| 10) | | | yes no not sure | yes no not sure |

8. Predominant Race of Family: (Circle one) White Indian Negro
9. Mailing Address: _____
10. Finding Address: _____
11. Family Doctor or Hospital: _____
12. Address of Doctor or Hospital: _____

COMMENTS:

Sincerely yours,

Earl W. Blank, Director of Clinical Services
Speech and Hearing Clinic
Northeastern State College
Tahlequah, Oklahoma

APPENDIX B

INSTRUCTIONS FOR QUESTIONNAIRES

To Person Issuing this Questionnaire:

The Speech and Hearing Clinic at Northeastern State College is attempting to locate all those people in your area (no matter what the age) who may need help because of a speech and/or hearing problem. In an effort to find these individuals we have designed the enclosed questionnaire. Please pass out one form to each student, explain how to fill it out, and have the students return it to you the following day. We believe it would be most effective to give the questionnaire out in the middle of the week rather than over the weekend, so that they may be returned the day following their distribution. Would you also tell the students they may have additional forms for families who have no one in high school if they know of persons who might be interested. In that event they should bring back these forms with their own.

It is very important that all spaces be filled out and appropriate answers circled. It is equally important that every form be returned to you and then to us. All forms are to be returned whether or not they are filled out.

We should like to have the parent give us the following information:

1. Date of issue of this questionnaire.
2. Issuing school: that is, your school.
3. Last and first names of all members of the family.
4. Age of each person in the family.
5. Sex of each person in the family: Male or female.
6. If any member of the family has trouble with hearing: Yes, no, not sure.
7. If any member of the family has trouble talking plainly: Yes, no, not sure.
8. Predominant race of family: White, Indian, Negro.
9. Mailing address.
10. Finding address: Specific directions to the family's home.
11. Family doctor or hospital: Where they go for medical treatment, i.e. Some Indian families go to the Indian Hospital.
12. Address of doctor or hospital.

We realize you are very busy, and we are reluctant to add extra work to your burden; however, we have no other dependable way of collecting this information. If the results of this survey indicate sufficient need, it is possible that in the future a mobile unit could serve your area and thus solve the serious problem of transportation to a clinic for speech and hearing services. All information will be regarded as confidential. Your cooperation will be deeply appreciated.

Sincerely yours,

Earl W. Blank
Director of Clinical Services

EWB/dw

APPENDIX C

INDIVIDUAL NOTICES OF APPOINTMENTS

The questionnaire which you filled out on the Speech and Hearing Survey indicated that you may have a speech and/or hearing problem.

We have scheduled you for testing on _____ (date)

at _____ (time) at _____ (testing center).

Other members of your family scheduled for the same time and date are:

If possible, please fill out the enclosed registration form(s) correctly. Bring the registration form for each member in the family to be tested when you come.

We hope that you will make a special effort to be present.

Earl W. Blank
Director of Clinical Services
Speech and Hearing Clinic
Northeastern State College
Tahlequah, Oklahoma

APPENDIX D

APPOINTMENT LETTER TO TEST CENTERS

Date: _____

Dear _____:

The testing team for the Government Speech and Hearing Project will arrive at _____
(center)

on _____ at _____
(date) (time)

to set up equipment. Enclosed is your list of names and the time they are due.

It is urgent that a nurse be at the registration desk for the 9:05--12:00 and 1:00--3:30 testing.

We do appreciate your cooperation and wish Godspeed to the success of this project.

Sincerely yours,

Earl W. Blank

Director of Clinical Services

APPENDIX E

DETAILED TEST SCHEDULE FOR THE CENTER

Dear _____:

The Government Speech and Hearing Project Team will be ready to test on the date, at the place and times listed below:

Date: _____ Place: _____

| Time: 9:05 a.m. | Time: 1:00 p.m. |
|---|---|
| 1. | 1. |
| 2. | 2. |
| 3. | 3. |
| 4. | 4. |
| 5. | 5. |
| 6. | 6. |
| 7. | 7. |
| 8. | 8. |
| 9. | 9. |
| 10. | 10. |
| 11. | 11. |
| 12. | 12. |
| 13. | 13. |
| 14. | 14. |
| 15. | 15. |
| 16. | 16. |
| 17. | 17. |
| 18. | 18. |
| 19. | 19. |
| 20. | 20. |
| 21. | 21. |
| 22. | 22. |
| 23. | 23. |
| 24. | 24. |
| 25. | 25. |

We shall deeply appreciate your further cooperation in seeing to it that all people listed above are present at the time and place stated.

We wish Godspeed to the success of this project.

Sincerely yours,

Earl W. Blank, Director of the Project

APPENDIX F

APPOINTMENT SCHEDULE FOR PSYCHOLOGICAL TESTING--OVR GRANT PROJECT

Test Center _____

Date: _____ Time: _____

| CHILDERS | BLANK | PACKWOOD |
|---|---|---|
| 4--7 (Scale 1) | 8--13 (Scale 2) | 14 up (Scale 3) |
| Names: | Names: | Names: |

When the testing team first started going out in the field we were only going to have three of the team give psychological tests. However, after a few times of going out to test we found it necessary to have four of the team administer the psychological tests. This is the first form we used. Following this sheet is a copy of the form we changed to after changing to four giving the tests.

APPENDIX G

REVISED APPOINTMENT SCHEDULE FOR PSYCHOLOGICAL TESTING
OVR GRANT PROJECT

Test Center _____

Date _____ Time _____

| CHILDERS<br>Ages 4--7 (Scale One) | BOTHELL<br>Ages 8-13 (Scale Two) |
|---|---|
| | |
| | |
| | |

REVISED APPOINTMENT SCHEDULE FOR PSYCHOLOGICAL TESTING
OVR GRANT PROJECT (CONTINUED)

Test Center _____

Date _____ Time _____

| PACKWOOD<br>Ages 14--29 (Scale Three) | BLANK<br>Ages 30 up (Scale Three) |
|---|---|
| | |
| | |
| | |

APPENDIX H

REGISTRATION

Name _____

Address _____

Sex _____ Age _____ Race _____

Referring Agency _____

Test Center _____

1. Are you presently enrolled in school? _____ What grade? _____

2. How many grades in school have you completed? _____

3. List any physical disabilities? _____

_____

4. Have you had any previous clinical services for speech and/or hearing? _____

Where? _____ When? _____

5. If you have not had treatment, why not?

APPENDIX I

REGISTRATION CARD

Registration cards were made out for each county for each person referred. The cards were file size 2 1/2" x 4 1/2".

Name _____

Address _____

_____

Sex _____ Age _____ Race _____

Referred by: _____
(issuing school)

Speech _____ Hearing _____

Each county was given a different color:

Adair - Pink
Cherokee - White
Delaware - Yellow
Sequoyah - Green

APPENDIX J

Speech and Hearing Clinic
Northeastern State College
Tahlequah, Oklahoma

SCREENING ARTICULATION TEST

Name _____ Address _____

Age _____ Sex _____ Grade _____ Race _____

| Scoring | Substitution: b/p | Omission: /p | Distortion x/p |
|---|---|---|---|
| one | | red | |
| two | | blue | |
| three | | yellow | |
| four | | purple | |
| five | | orange | |
| six | | green | |
| seven | | white | |
| eight | | black | |
| nine | | | |
| ten | | | |

Comments:

APPENDIX K

AUDIOMETRIC SCREENING TEST

Race_____

Grade_____

| Subject's Last Name, First Middle | Sex | Age | Date |
|---|---|---|---|
| | | | |
| Subject's Address: | | | |
| Audiometer | Audiometrist | | |

Do you feel that your hearing is normal? Yes No (Circle One)
Do you feel that a hearing aid would help you? Yes No Have Aid (Circle One)

| RIGHT EAR | | | | | | | LEFT EAR | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

On this screening test the audiometer was set at 20 decibels sensation level re: 1964 ISO reference thresholds.

Subject's Instruction: We want to see how well you can hear faint tones and to do this I am going to put these earphones on you. What you will hear is just a short "BEEP". Each time you hear the "BEEP" I would like for you to raise your finger up and put it right back down. These "BEEPS" will be hard to hear so you will have to listen very carefully. Do you understand?

Audiometrist's Instructions: Set the dial on the audiometer at the designated screen level and present the pure tone air conduction stimuli. Give at least three tones for each frequency; subject must respond to at least two of these tones. Test all of the above frequencies on each ear. As a response is gained you will make a check mark in the appropriate square designating the test ear and test frequency. If a response is not gained after two tone presentations leave the square blank. Also be sure to read the instructions to the subject aloud. Be sure that he understands directions. The instructions may be repeated, or you may let him read them.

## APPENDIX L

## DESCRIPTION OF OTHER TESTS

The other tests used were copyrighted and cannot be duplicated. They were:

For Vision --

Keystone Visual Survey Tests
Copyright 1961 Keystone View Company
Meadville, Pennsylvania

For Psychologicals --

For ages 4--7 Test of g: Culture Fair
Scale 1
Prepared by R. B. Cattell

For ages 8--13 Test of g: Culture Fair
Scale 2, Form A
Prepared by R. B. Cattell and A. K. S. Cattell

For ages 14--29 Test of g: Culture Fair
Scale 3, Form A
Prepared by R. B. Cattell and A. K. S. Cattell

For ages 30 up:
Same as for ages 14--29.

All tests and information may be obtained from the Institute for Personality and Ability Testing, 1602-04 Coronado Drive, Champaign, Illinois.

APPENDIX M

O. V. R. C A L L B O A R D

Date _____

NOTICE

---

Blank _____ Childers _____

Bothell _____ Packwood _____

(Please check when read.)

APPENDIX N

Vocational Rehabilitation Survey
Speech and Hearing Clinic
Northeastern State College
Tahlequah, Oklahoma

Dear _____:

The results of the testing done by the Vocational Rehabilitation Survey Team indicate that more complete testing might be beneficial to you.

If you are interested in receiving more complete testing, please use the enclosed postcard to let us know that you want us to schedule you for an appointment. We will then notify you when to come.

Sincerely yours,

Earl W. Blank

Director of Clinical Services

EWB/dw

APPENDIX O

TABULATION SHEET

| NAME | ADDRESS | COUNTY | CENTER | AGE | SEX | GRADE | ARTIC | MD | |
|---|---|---|---|---|---|---|---|---|---|
| 1.<br>Other Comments? | | | | | | | | | |
| 2.<br>Other Comments? | | | | | | | | | |
| 3.<br>Other Comments? | | | | | | | | | |
| 4.<br>Other Comments? | | | | | | | | | |
| 5.<br>Other Comments? | | | | | | | | | |

Note: MD = Marked Disorder.
Artic = Articulation Test.

TABULATION SHEET (CONTINUED)

| INVALID WHY? | AUDIO L R | MD | INVALID WHY? | TELE | MD | INVALID WHY? | PSYCHOLOGICAL (I.Q.) 4-7 8-13 14-29 30 up 1__ 2___ 3____ 3____ | RACE |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Individual's scores were tabulated on the above form to be used in office clerical work and to see results on each individual's complete outcome.

Note: Invalid = Tests Invalidated.
Audio = Audiometric Tests.
MD = Marked Disorder.
Tele = Telebinocular Test.

APPENDIX P

INDIVIDUAL REQUEST FOR FURTHER TESTING

Following the testing each individual who was tested and who had a marked disorder in any of the tested areas, was sent a notice to determine his interest in further complete testing. The form used was:

Yes, I would like to be scheduled for more complete testing on your Speech and Hearing Survey.

_____

Signature

APPENDIX Q

APPOINTMENT CARD

On receipt of the returned card appointments were set up using the following appointment card:

_____

HAS AN APPOINTMENT AT
THE SPEECH AND HEARING CLINIC
NORTHEASTERN STATE COLLEGE
TAHLEQUAH, OKLAHOMA
Phone GL 6-2531, Ext. 2218

Mon._____at_____

Tues._____at_____

Wed._____at_____

Thurs._____at_____

Fri._____at_____

Sat._____at_____

Initial Interview_____☐

Speech Evaluation_____☐

Hearing Evaluation_____☐

Hearing Aid Evaluation_____☐

Psychological Testing_____☐

Speech Therapy_____☐

APPENDIX R

REFERRAL LETTER

December 3, 1965

Johnnie Nichols, Director
Vocational Rehabilitation Division
813-815 Barnes Building
Muskogee, Oklahoma 74401

Dear Mr. Nichols:

Dr. Viaille asked us to refer the persons who were found to have hearing handicaps and are believed to be in need of further services.

These needs were determined as a result of our recent four-county survey of speech and hearing needs.

We are enclosing a list of these persons.

Sincerely yours,

Earl W. Blank
Director of Clinical Services

EB/cs

## APPENDIX S

## REFERRAL LIST

| | NAME | ADDRESS | AGE | SEX | RACE |
|---|---|---|---|---|---|
| 1. | S-24 | S | 61 | M | W |
| 2. | C-15 | C | 48 | F | W |
| 3. | A-30 | A | 30 | F | W |
| 4. | D-47 | D | 27 | F | W |
| 5. | C-47 | C | 43 | F | W |
| 6. | S-11 | S | 65 | M | W |
| 7. | S-119 | S | 17 | M | W |
| 8. | S-140 | S | 57 | F | W |
| 9. | A-53 | A | 17 | M | W |

Note: To keep names and addresses confidential, the Speech and Hearing Clinic code system was used.